

An Update from the Casualty Actuarial Society

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Agenda

- Opening Remarks
- The CAS Institute
- Basic Education
- Continuing Education
- CAS Research Priorities
- Other Topics
- Questions and Discussion



Introducing The CAS Institute



What is The CAS Institute?

- Subsidiary of the Casualty Actuarial Society
- Provides credentialing and professional education to quantitative specialists in selected areas, such as:

Predictive
Analytics / Data
Science

Catastrophe
Modeling

Capital Modeling
/ ORSA analysis

Quantitative
Reinsurance
Analysis

Other analytics
and quantitative
specialties



Why was The CAS Institute Created?

To meet a market need for specialization

- Actuaries working in advanced analytics and data science
- Data scientists working in the insurance industry

To serve professionals in practice areas where quantitative and actuarial skills overlap

To allow the CAS to continue its focus on credentialing property and casualty actuaries

What Value will The CAS Institute Credentials Provide to Candidates?

- Provides recognition of expert knowledge
- Demonstrates knowledge of practical applications
- Sets candidates apart from others
- Enhances skills
- Provides opportunities for additional job duties
- Helps candidates advance their careers
- Provides a community for professionals



Requirements: Four Parts

Knowledge Assessment/Validation

- PART A: Domain Knowledge – Insurance Principles (P&C)
 - Extracts from CAS Online Courses 1 & 2
 - Extracts from Intro to Ratemaking / Reserving (CAS Exam 5)
- PART B: Data Concepts, Tools and Visualization
- PART C: Predictive Modeling – Methods and Techniques
- PART D: Project in Predictive Modeling Application
 - Not an exam or online module
 - Individual Project
 - Project Advisor
 - Project Review Panel



Delivery of Assessments/Validation

- PART A: Domain Knowledge – Insurance Principles (P&C)
 - One Online Module – similar to CAS Online Courses 1 and 2
 - Exam through The Institutes (multiple choice, short answer)
- PART B: Data Concepts, Tools and Visualization
 - Computer-Based exam – ability to use software and program
- PART C: Predictive Modeling – Methods and Techniques
 - Computer-Based exam – ability to use software and program
- PART D: Project in Predictive Modeling Application
 - Project proposal, project approval, project submission
 - Possibly use an online project site for each project



Basic Education

Current Strategic Focus:

- Statistics
- Technology
- Communication



Basic Education: Statistics

- New Exam S (Statistics and Probabilistic Models)
 - Replaces Exam ST, Exam LC, and VEE Statistics
 - 4-hour multiple choice exam
 - First offered in Fall 2015



Basic Education: Technology

- Exploring what methods/platforms the CAS might consider to deliver educational content.
- Exploring what methods/platforms the CAS might consider in its assessments of candidates' achievement of the CAS learning objectives.
- Exploring solutions to allow candidates to take exams in more real-life situations:
 - Word for responding to an essay questions
 - Excel for crunching through a reserving triangle
 - R to develop predictions on large databases for Stats exams



Basic Education: In Summary

- Constantly being adapted and refreshed
 - Emergence of new P&C risks and coverages
 - New era of Big Data and Big Data methods
 - Evolving expectations on the part of students on how educational content is delivered and tested
- Curriculum reflects experience of practicing actuaries who understand what is required to practice in casualty actuarial field



Continuing Education

Current Strategic Focus:

- Increase the use of technology to deliver interactive programs
- Promote cost effective ways members can meet CE requirements
- Partner with other organizations that work closely with CAS members in common business sectors



CAS Research

From the CAS Strategic Plan:

- The CAS will be recognized globally for developing and publishing practical applications of cutting edge research in property/casualty topics.



CAS Innovation Initiative

Objectives:

- Foster and promote innovation as a priority for the CAS
- Develop and adopt high value innovations into actuarial practice



CAS Innovation Council

Current Activities:

- Actuarial Innovator Profile Series
 - Predictive analytics
 - Catastrophe management
 - ERM framework
 - Credit risk analysis
 - A CEO's perspective
- Call for Essays on Actuarial Innovation
- Developing an Innovation Network
- Launching the CAS Accelerator



Global Community

International Activities

- Asia REgion Casualty Actuaries (ARECA), the newest CAS Regional Affiliate
 - Inaugural Seminar in Beijing
 - P/C Seminar in Singapore
- General Insurance and General Takaful Ratemaking Seminar in Malaysia (joint with Australia and Malaysia organizations)



Questions and Discussion



The CAS Institute – Recent Questions

What is the expected difficulty, rigor, and time commitment vs. CAS exams?

- Not as comprehensive as actuarial requirements
- Deeper in certain specialized quantitative skills
- Manageable modular approach for learning additional skills
- Less time to complete than for ACAS or FCAS
- Less of a commitment than for a Masters or PhD



The CAS Institute – Recent Questions

How will the experience practitioner process work? Will candidates need to have a published work – like a dissertation or thesis?

- Will not require having published work. However, published work would demonstrate experience.
- Requirements for experienced practitioners to earn the credential are under development



The CAS Institute – Recent Questions

What have been the reactions to the announcement of The CAS Institute?

- Market research shows support and interest from both employers and potential credential holders.
- Very positive among CAS members.
- Inquiries and interest from outside the actuarial profession



Strategic Alliance



The Institutes®



How will iCAS be working with The Institutes?

CAS will join forces with The Institutes to accelerate the delivery of The CAS Institute programs

- Study material and exams for quantitative specialists
- State-of-the-art methods for testing and grading

Relationship will enable complementary offerings for professional education to the insurance industry

- Application of data analytics to the industry problems
- Collaboration among actuaries, underwriters, risk and claims professionals, etc.



How are the CAS and The CAS Institute Different?

Casualty Actuarial Society	The CAS Institute
Independent professional society	Wholly-owned subsidiary of CAS
Premier credentialing and professional association for property and casualty (P&C) actuaries	Offers specialty credentials in selected quantitative practice areas that target both actuarial and non-actuarial professionals
For actuaries working primarily in the insurance sector	Will span multiple sectors, including insurance and risk management



How will the CAS Institute Credentialing Process Work?

Candidates will follow a relevant course of study, including self-study programs that meet specified learning objectives.

- Knowledge and competency assessments will include examinations, and possibly a project.
- May grant credit for previously completed academic courses, academic degrees, professional technical papers, or other evidence of practical specialized knowledge and experience.



How Will the CAS Institute Ensure the Quality of its Credentials?

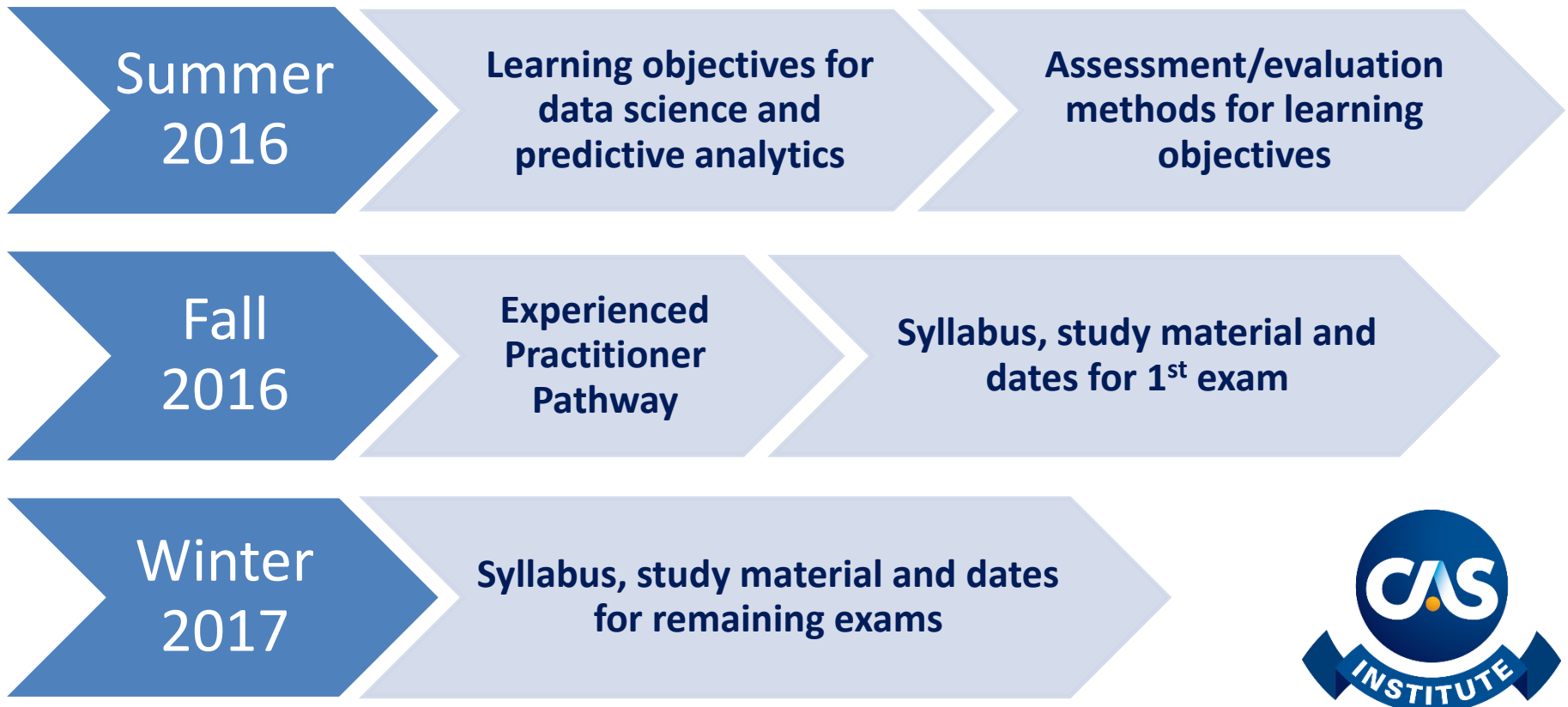
Oversight by an expert panel of industry specialists and thought leaders in each practice area that:

- Establishes eligibility requirements
- Creates the curriculum
- Directs development of educational materials
- Sets competency levels
- Oversees high-quality examination
- Establishes experienced practitioner pathway



The CAS Institute – Recent Questions

- What is the timeline for iCAS?
- When will the first courses and exams be offered?



Basic Education: Communication

Increasing Engagement with Candidates:

- Online Community
 - Blog posts
 - Calendar
 - File library
 - Exclusive updates
- E-mail newsletters
- Quarterly printed newsletter
- Candidate Advisory Panel



Basic Education: Communication

Enhancing Relationships with Universities

- University Liaison Program
 - 400 CAS members supporting 350 schools
- Academic Central
 - 300 academic members from 180 schools
- Student Central
 - 4,200 student members from 375 schools



Basic Education: Communication

New University Engagement Resources

- CAS University Award Program
- P&C Resource Library for academics
- CAS exam reimbursements for academics who pass CAS exams
- Case Competition Tool Kit
- CAS Student Central Ambassador Program



CE Programs – 2016

- Casualty Loss Reserve Seminar
- ERM for the P&C Actuary
- In Focus: The Gathering Storm – Digital and Climate Disruptors
- CAS Annual Meeting
- Limited Attendance Seminars
- Regional Affiliate Meetings
- Monthly Webinars (some complimentary)
- UCAS – CE on-demand
 - Session Recordings
 - Interactive Online Courses



Professionalism

- CAS recently formed a **professionalism steering committee** with representatives identified from various other committees that deal with professionalism issues.



CAS Research

- *Variance* papers
- Calls for papers
- Funded papers
- Papers by research committees and working parties
- Papers by academics
- Excel templates

Variance Advancing the Science of Risk



CAS Research: 2016 Initiatives

Top Responses from 250+ members and 75+ academics:

- Predictive model credibility accuracy (#1) (#1)
- Economic scenarios, correlation assumptions for stress testing (#2) (#7)
- Long term accuracy of reserving techniques (#3) (#4)
- Making new reserving methods usable/understood (#4) (#10)
- Integrating stochastic techniques and analyses to estimate reserve range (#5) (#6)
- Limitations of models, assumptions, etc. (#6) (#9)
- Ranges of reasonable reserve estimates (#7) (#14)
- Models/distribution selection procedures (#8)
- Measuring & communicating uncertainty (#9) (#8)
- Quantitative assessment of model data quality (#13) (#3)
- Evaluating and quantifying cyber risk (#17) (#5)
- Modeling operational risk for P&C insurers (#19) (#2)



Diverse Community

CAS Diversity Strategy

- Adopted in March 2015
- Goal: A multi-dimensional property/casualty actuarial profession through recruitment of talent from under-represented groups



We Welcome Your Input On:

- CAS Basic Education
- CAS Professional Education Offerings and CE Requirements
- CAS Research
- International Activities
- Membership and Governance Issues
- Other Topics
- Questions and Discussion

